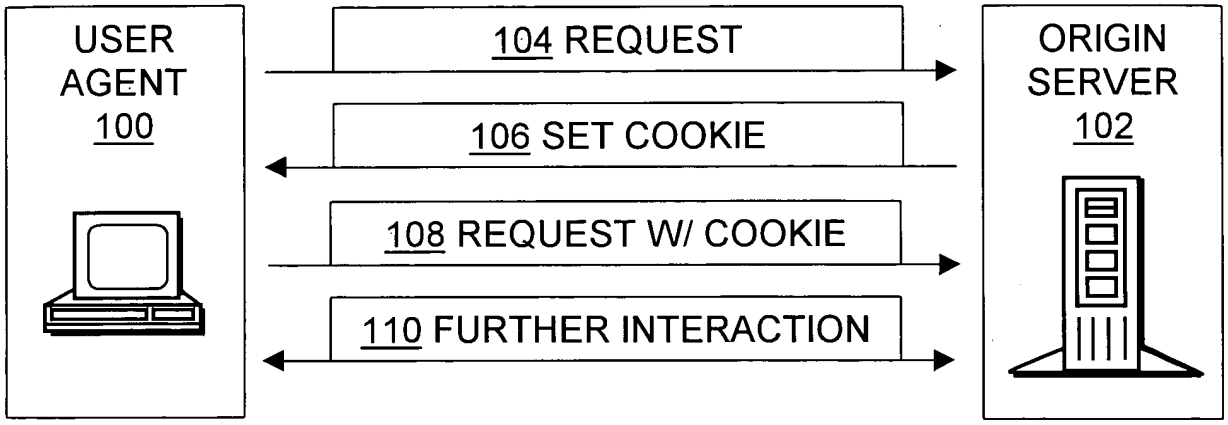
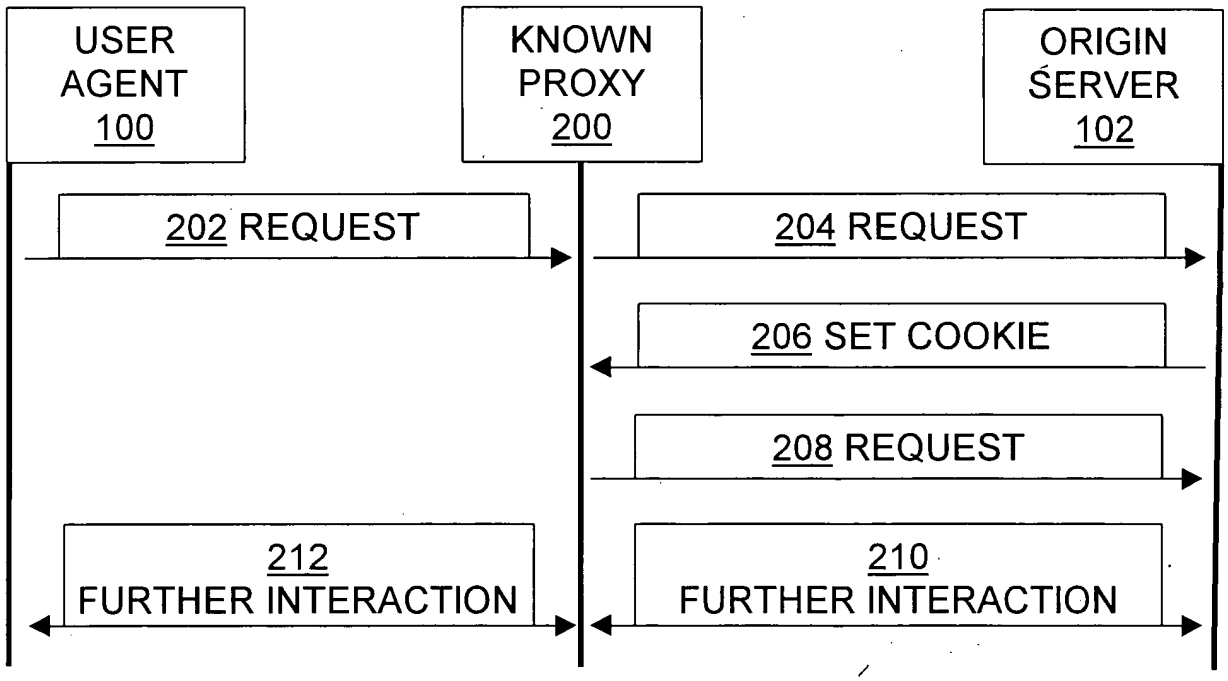


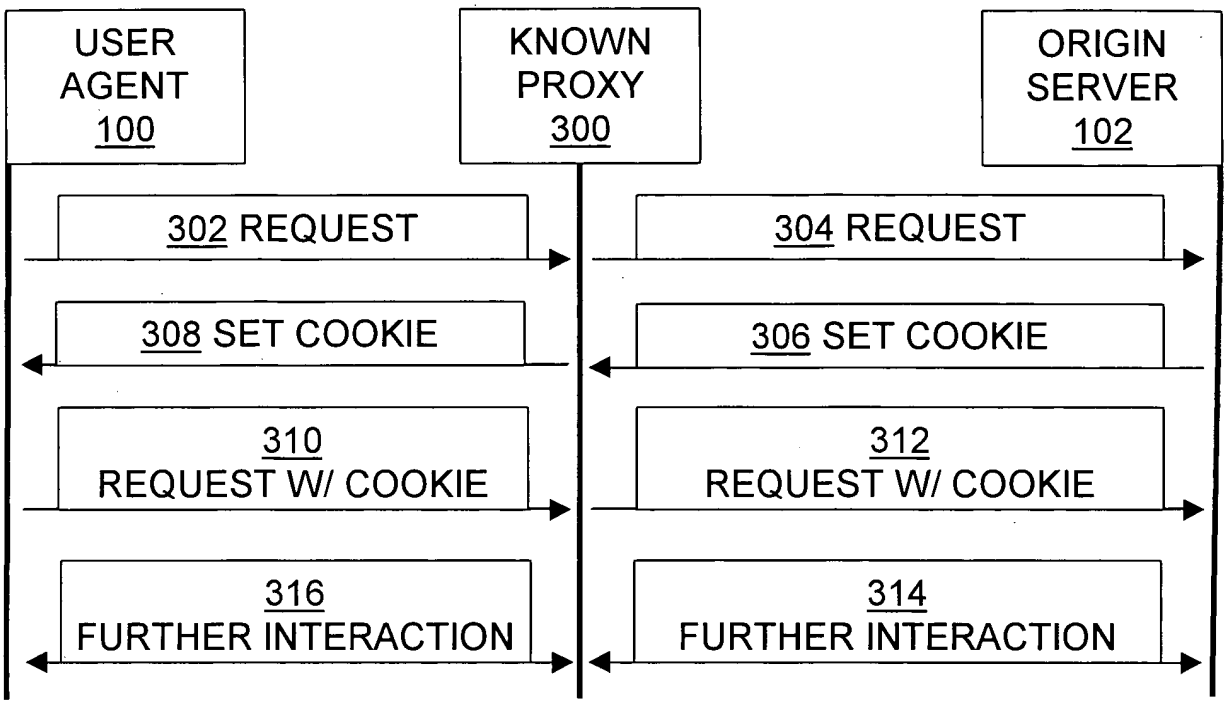
(PRIOR ART)

Fig. 1



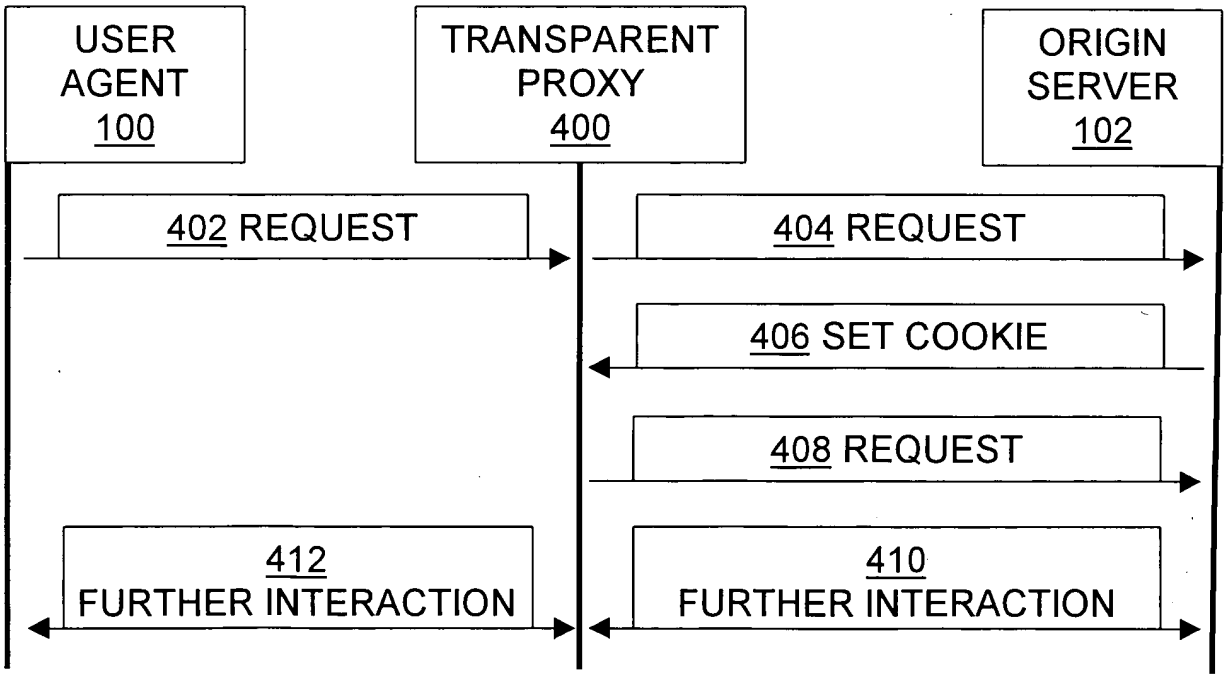
(PRIOR ART)

Fig. 2



(PRIOR ART)

Fig. 3



(PRIOR ART)

Fig. 4

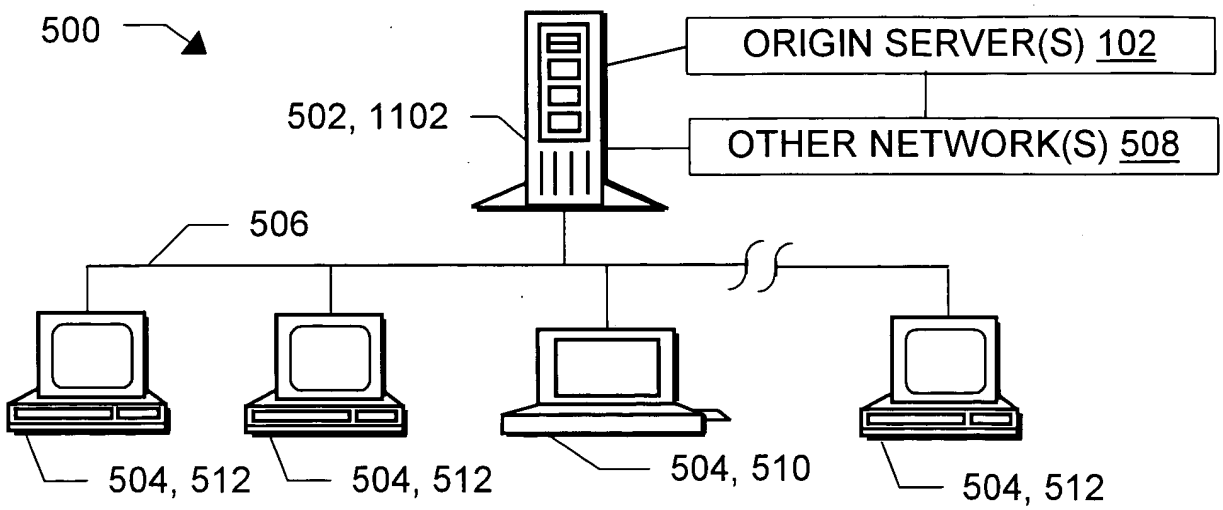

500
ORIGIN SERVER(S) 102
502, 1102
OTHER NETWORK(S) 508
506
504, 512
504, 512
504, 510
504, 512

Fig. 5

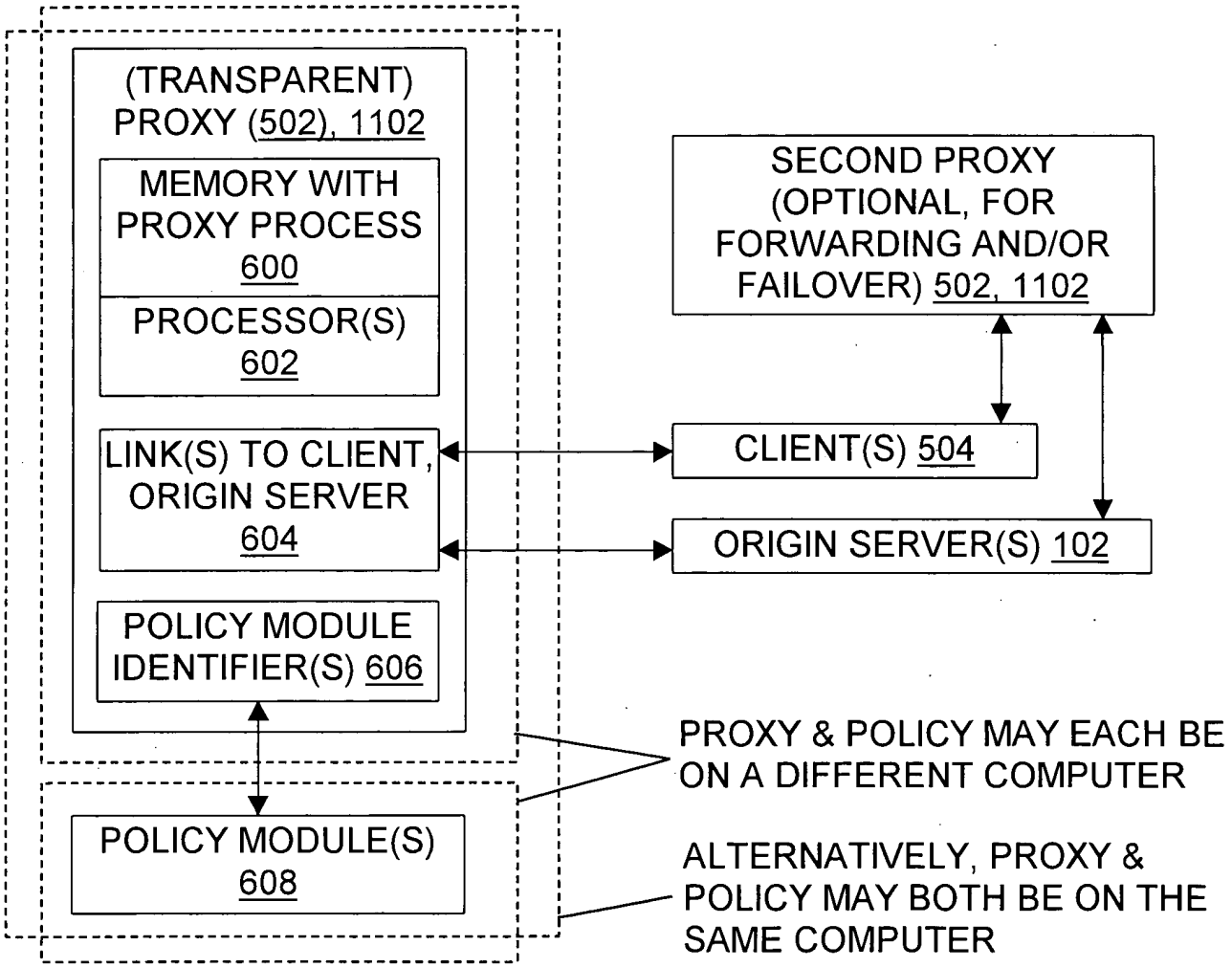

(TRANSPARENT) PROXY (502), 1102
MEMORY WITH PROXY PROCESS 600
PROCESSOR(S) 602
LINK(S) TO CLIENT, ORIGIN SERVER 604
POLICY MODULE IDENTIFIER(S) 606
POLICY MODULE(S) 608
SECOND PROXY (OPTIONAL, FOR FORWARDING AND/OR FAILOVER) 502, 1102
CLIENT(S) 504
ORIGIN SERVER(S) 102
PROXY & POLICY MAY EACH BE ON A DIFFERENT COMPUTER
ALTERNATIVELY, PROXY & POLICY MAY BOTH BE ON THE SAME COMPUTER

Fig. 6

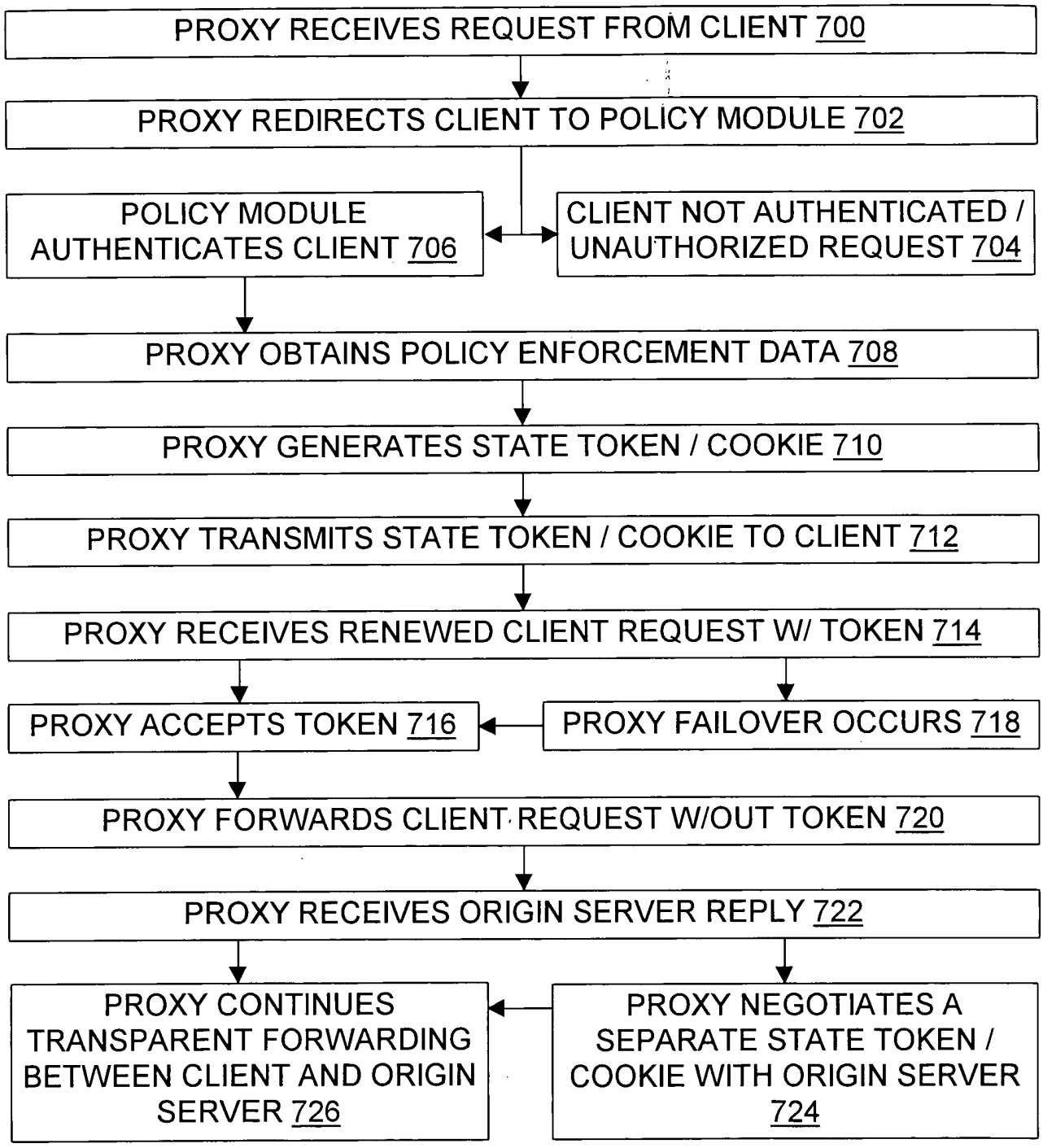

PROXY RECEIVES REQUEST FROM CLIENT 700
PROXY REDIRECTS CLIENT TO POLICY MODULE 702
POLICY MODULE AUTHENTICATES CLIENT 706
CLIENT NOT AUTHENTICATED / UNAUTHORIZED REQUEST 704
PROXY OBTAINS POLICY ENFORCEMENT DATA 708
PROXY GENERATES STATE TOKEN / COOKIE 710
PROXY TRANSMITS STATE TOKEN / COOKIE TO CLIENT 712
PROXY RECEIVES RENEWED CLIENT REQUEST W/ TOKEN 714
PROXY ACCEPTS TOKEN 716
PROXY FAILOVER OCCURS 718
PROXY FORWARDS CLIENT REQUEST W/OUT TOKEN 720
PROXY RECEIVES ORIGIN SERVER REPLY 722
PROXY CONTINUES TRANSPARENT FORWARDING BETWEEN CLIENT AND ORIGIN SERVER 726
PROXY NEGOTIATES A SEPARATE STATE TOKEN / COOKIE WITH ORIGIN SERVER 724

Fig. 7

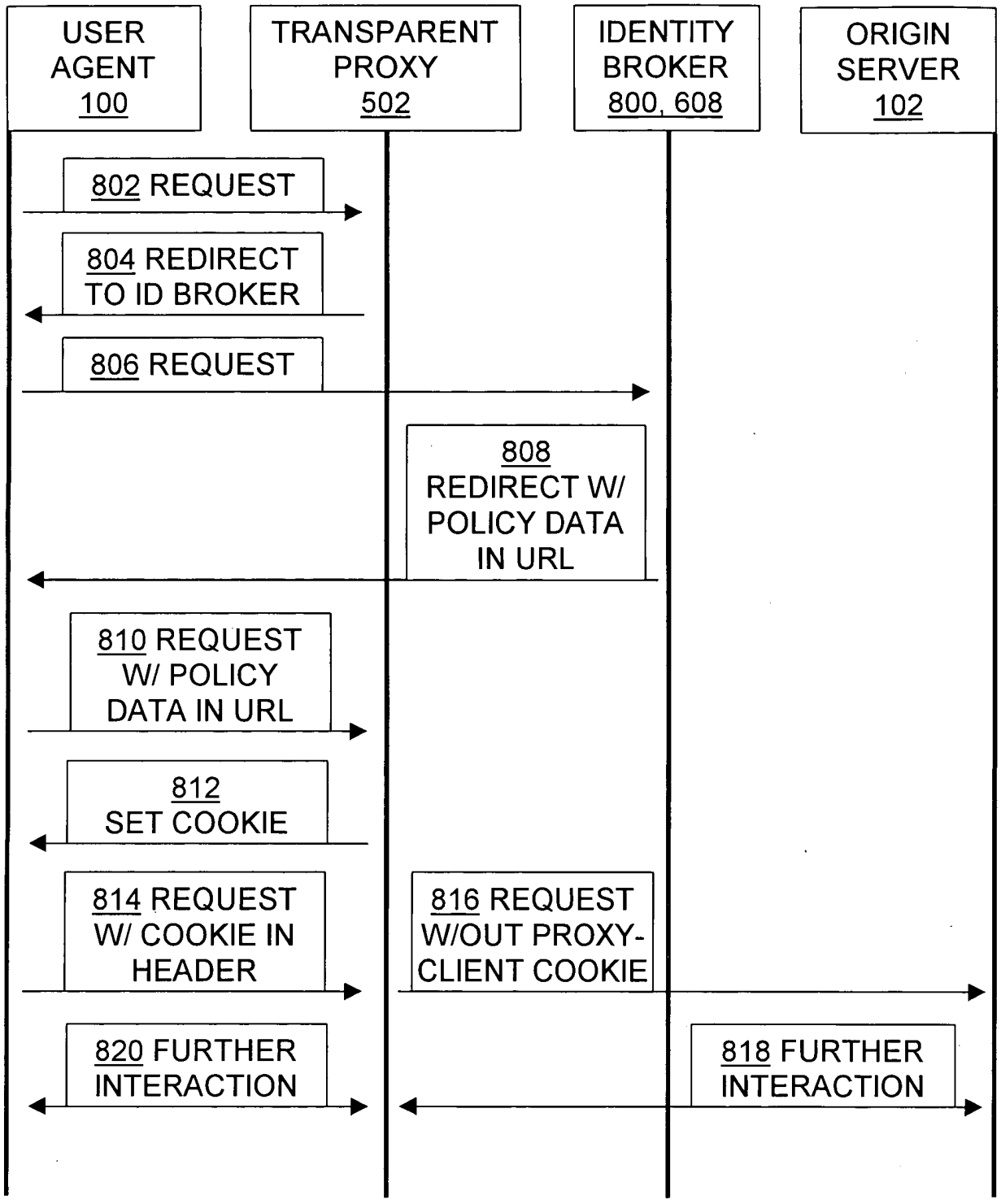

USER AGENT 100
TRANSPARENT PROXY 502
IDENTITY BROKER 800, 608
ORIGIN SERVER 102
802 REQUEST
804 REDIRECT TO ID BROKER
806 REQUEST
808 REDIRECT W/ POLICY DATA IN URL
810 REQUEST W/ POLICY DATA IN URL
812 SET COOKIE
814 REQUEST W/ COOKIE IN HEADER
816 REQUEST W/OUT PROXY-CLIENT COOKIE
820 FURTHER INTERACTION
818 FURTHER INTERACTION

Fig. 8

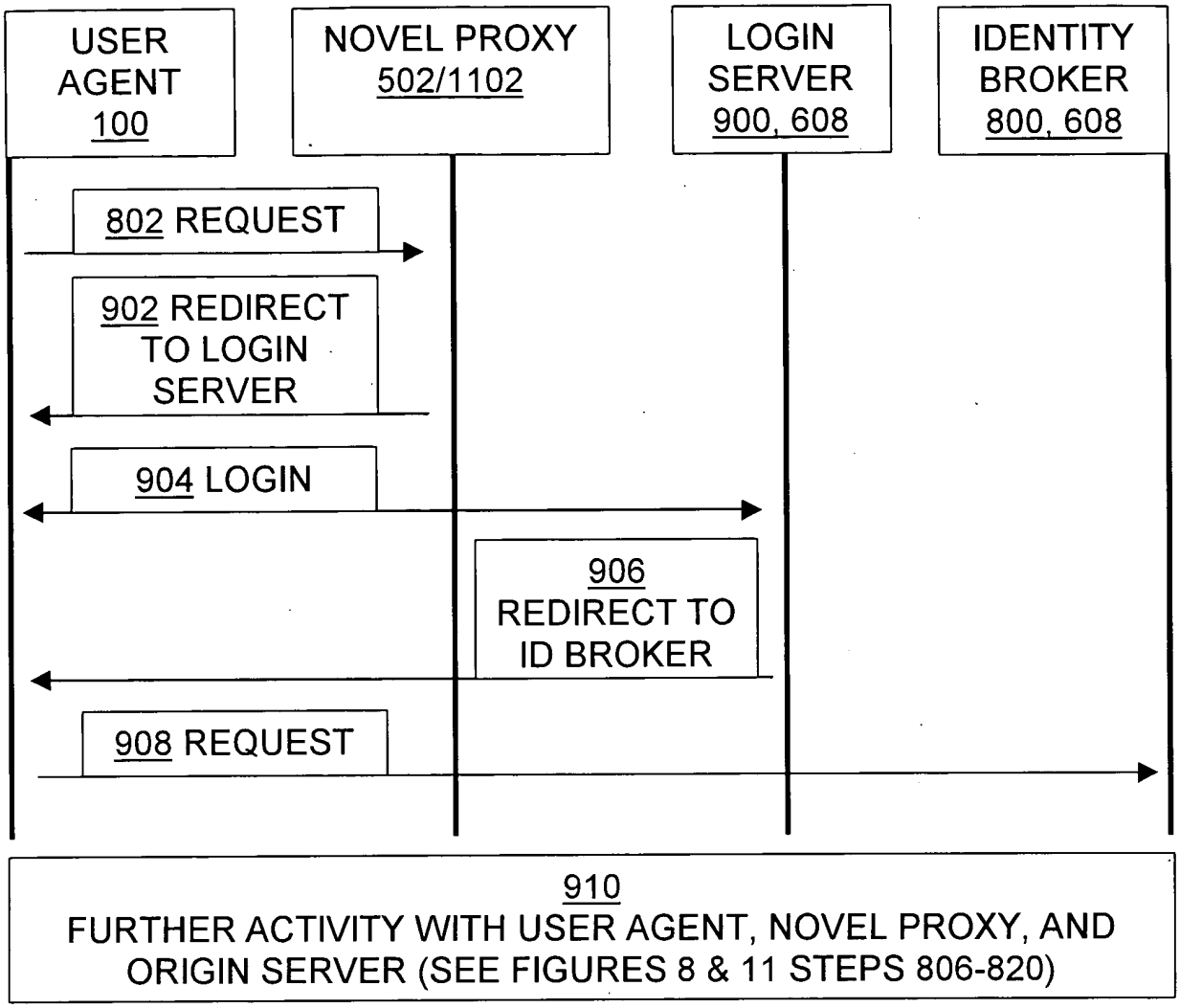

USER AGENT 100
NOVEL PROXY 502/1102
LOGIN SERVER 900, 608
IDENTITY BROKER 800, 608
802 REQUEST
902 REDIRECT TO LOGIN SERVER
904 LOGIN
906 REDIRECT TO ID BROKER
908 REQUEST
910
FURTHER ACTIVITY WITH USER AGENT, NOVEL PROXY, AND ORIGIN SERVER (SEE FIGURES 8 & 11 STEPS 806-820)

Fig. 9

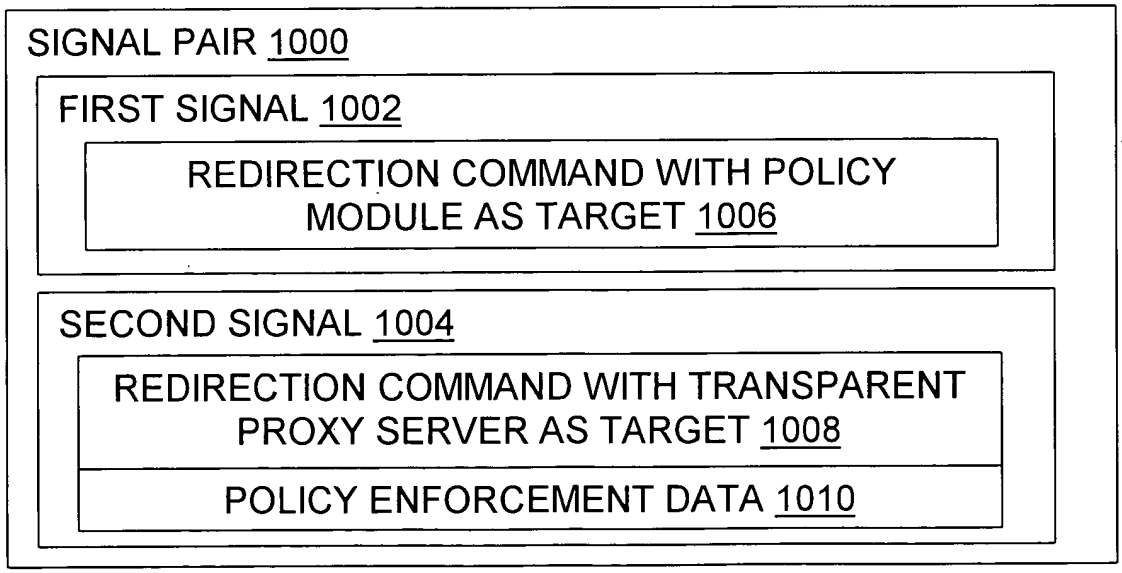

SIGNAL PAIR 1000
FIRST SIGNAL 1002
REDIRECTION COMMAND WITH POLICY MODULE AS TARGET 1006
SECOND SIGNAL 1004
REDIRECTION COMMAND WITH TRANSPARENT PROXY SERVER AS TARGET 1008
POLICY ENFORCEMENT DATA 1010

Fig. 10

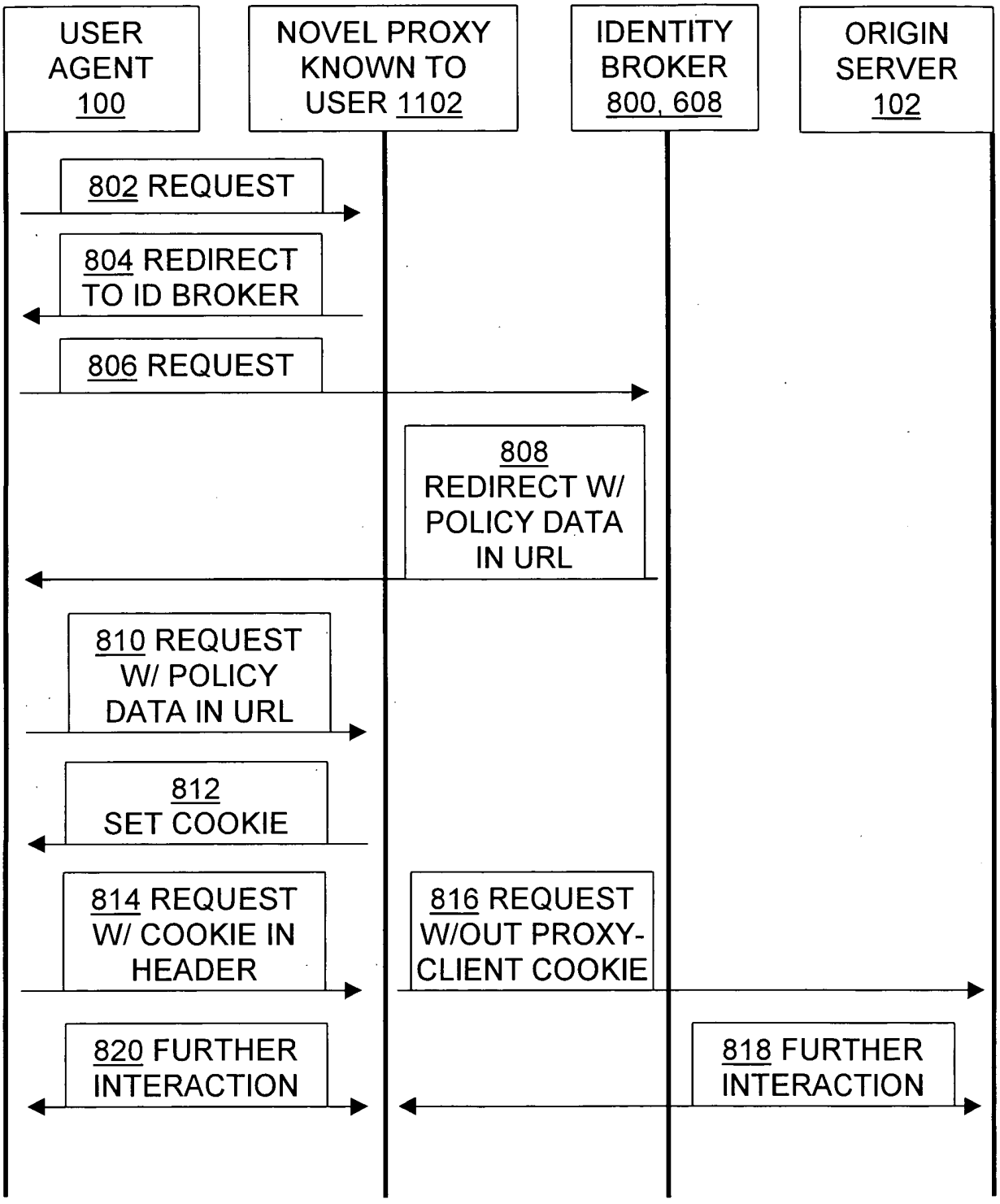

USER AGENT 100
NOVEL PROXY KNOWN TO USER 1102
IDENTITY BROKER 800, 608
ORIGIN SERVER 102
802 REQUEST
804 REDIRECT TO ID BROKER
806 REQUEST
808 REDIRECT W/ POLICY DATA IN URL
810 REQUEST W/ POLICY DATA IN URL
812 SET COOKIE
814 REQUEST W/ COOKIE IN HEADER
816 REQUEST W/OUT PROXY-CLIENT COOKIE
820 FURTHER INTERACTION
818 FURTHER INTERACTION

Fig. 11